50 YEARS SINCE THE SOCIALIST REVOLUTION IN BULGARIA

ZHECHO
ATANASSOV

EDUCATION AND SCIENCE IN THE PEOPLE'S REPUBLIC OF BULGARIA

SOFIA PRESS

ZHECHO ATANASSOV

EDUCATION AND SCIENCE IN THE PEOPLE'S REPUBLIC OF BULGARIA

SOFIA PRESS 1974

CONTENTS

A COUNTRY WITH TRADITIONS OF CENTURIES IN EDUCATION

The emergence of the educational system and the development of culture and science in Bulgaria are closely associated with the great historic achievement of the two Slav enlighteners Cyril and Methodius. The acquisition of a script of their own enabled the Bulgarians to avoid Byzantine cultural domination and also to create their own specific culture, scholarship and educational system.

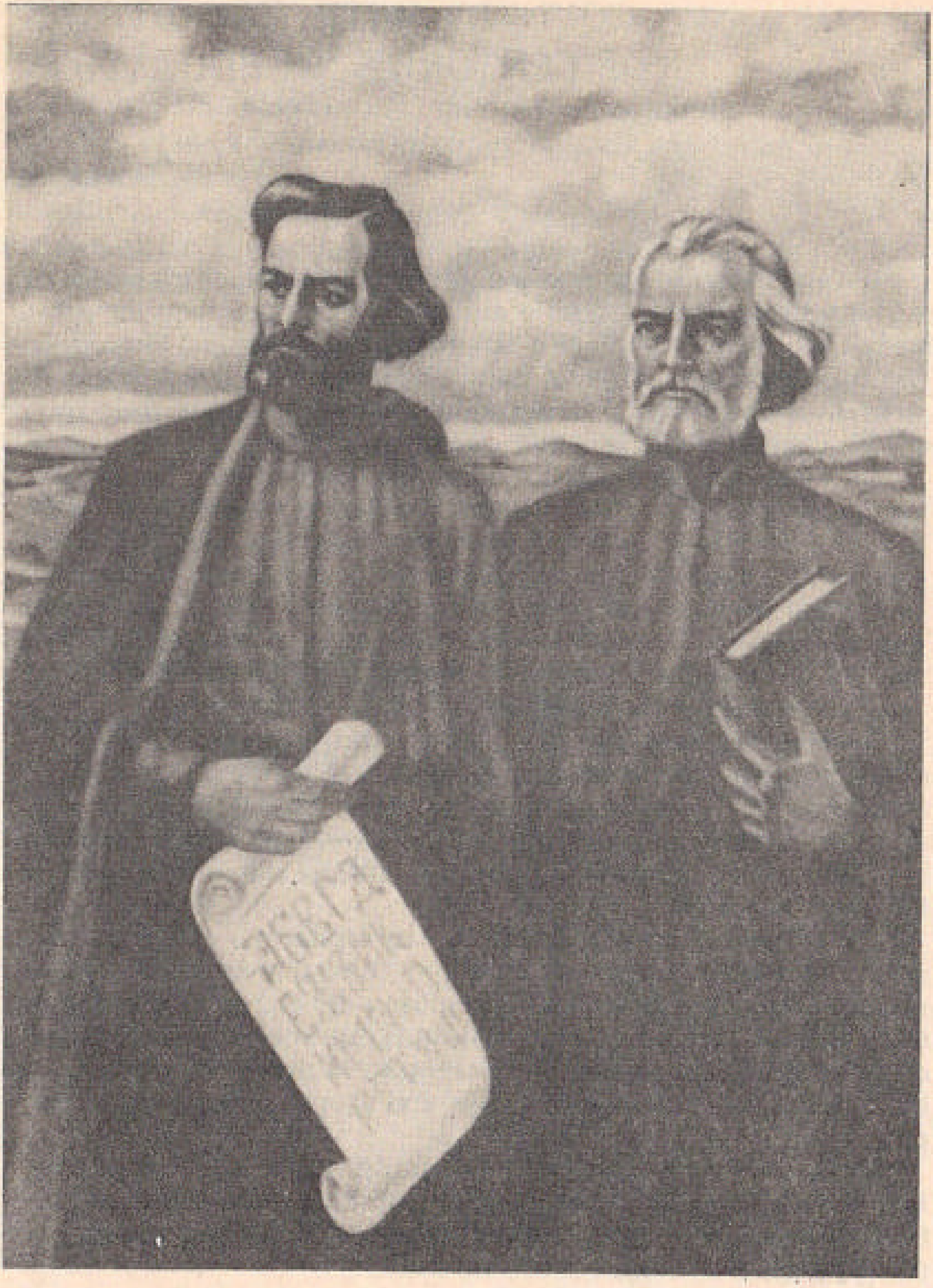
The beginnings of Bulgarian education can be traced back to the opening of the Ohrid School, founded by Clement of Ohrid (b. 835-840, d. 916) a disciple of Cyril and Methodius. In this school, which was completely democratic in character, Clement trained about 3,500 students in the course of seven years, as reported by the 11th century Byzantine writer Theophilactes. Many graduates of this school became teachers and preachers, who were responsible for the spread of literacy and culture among the population of medieval Bulgaria.

Clement of Ohrid was not only the first teacher, but also an outstanding writer and scholar. A number of works are ascribed to him: sermons, homilies and eulogies about notable Christian missionaries. It is also assumed that Clement revised the alphabet evolved by Cyril and Methodius and adapted it even more closely to the spoken Bulgarian language.

The school set up at that time in the capital city of Preslav also played an important role in the country's cultural progress. This was a predominantly literary school. Its graduates did a great deal to enrich Old Bulgarian literature. In 893 Tsar Boris convened a National Council which decided to replace liturgical books in the Greek language by books in the Slav-Bulgarian language, and to open training schools for priests.

Medieval Bulgaria also had its outstanding teacher – Constantine Kostenechki, who worked in the first half of the 15th century. In his book *Of Letters* he devoted a special chapter to methods of teaching in the people's own tongue.

In 1396 Bulgaria fell under Ottoman domination. In the course of nearly five centuries the Bulgarian people lived and struggled under extremely difficult conditions. The plight of the population in bondage



Cyril and Methodius

grew particularly bad in the 16th century when signs of a decline of the military power of Turkish feudalism became apparent.

The churches and monasteries were the only centres in which Bulgarian education was preserved and spread wide. The medieval church books were also kept in them. Early in the 15th century schools were opened at the churches and monasteries, known as monastery or 'cell' schools, in which children were given elementary schooling. The church books served as textbooks and the teachers were usually priests or monks. Private schools of this type were later opened at the homes of certain secular people, notably church singers or literate craftsmen. Despite their primitive organization and the low level of teaching, these schools continued in existence for about 400 years. They were the schools of the Middle Ages, meeting, above all, the needs of the Church as a medieval ideological institution.

The Bulgarian National Revival began rather late in comparison with the Renaissance in the European countries, because of the difficult conditions of life under foreign oppression. The bourgeoisie, emerging on the historical stage, became the bearer of the progressive ideas of the times. However, the strong economic competition of the Greek bourgeoisie was a serions obstacle to the development of the Bulgarian crafts and trade. This explains why the most ardent fighters against the Greek influence in the Church and education came from among the Bulgarian craftsmen and merchants. Extensive strata of the population were drawn into the fight for national survival and identification, which gave this struggle a deeply democratic character.

The first exponent of the ideas of the Bulgarian Revival was the monk Païssiy, of the Bulgarian Monastery of Hilendar on Mount Athos. In his *Slav-Bulgarian History* (1762) Païssiy appealed to the Bulgarian people to cherish their own traditions, to study and preserve them, and not to be ashamed, but proud of their glorious past and origin. His work is in itself an ardent, temperamental defence of the interests of the Bulgarian people. Païssiy emphasized the imperative need of being able to read and write in the spoken Bulgarian language.

Sophronius of Vratsa (1739-1814) was a zealous disseminator of Païssiy's ideas. He set about spreading his teacher's *History* and writing books in the native Bulgarian language so as to awaken and enlighten the people in bondage.

Dr Peter Beron (1799-1871) was the first person who attempted to put the ideas of Païssiy and Sophronius into practice in the field of education. In his *Primer with Various Instructive Matter* (1824) Beron showed his worth as a fearless educational reformer and talented teacher. He promoted the idea of purely secular, popular education. In

Climent of Ohrid in the Church of the Virgin Peribleptos in Ohrid, 1295

Païssy of Hilendar

his *Primer* he gave practical knowledge in arithmetic, biology, geography and hygiene. The textbook was intended to train people not for the Church but for worldly life and the new forms of production.

However, Peter Beron's ideas were, as yet, only a theoretical formulation of the outstanding problems. His ideas were realized in practice in the first Bulgarian school of a secular character, opened in the town of Gabrovo in 1835. The credit for this goes to Vassil Aprilov (1789-1847). The Gabrovo school became the model after which many other schools were set up throughout the country. It had such a strong impact on its contemporaries that in a number of calendars of the National Revival period the years which had passed since that event were indicated side by side with the calendar year.

Russian influence, which was gaining scope with the rapidly expanding cultural and educational contacts with Russia was of particular importance for the development of modern Bulgarian education. During the 'forties of the last century many Bulgarians obtained

Vassil Aprilov

Peter Beron

their education in Russian educational establishments. Returning to Bulgaria, they became ardent disseminators of the progressive Russian culture. Russian influence was particularly strongly felt in the organization of the schools of the 'forties, in which pupils were given extensive knowledge of the humanitarian and natural sciences. In the 'sixties, girls' schools were opened as well.

Special vocational training also developed. In 1873, the first commercial school was opened in Svishtov. Special training in agriculture and in teaching was given in a number of schools.

The advance in education in the days of the Revival was part of the general economic, political and cultural progress marked by the Bulgarian people. For its part the school, a cherished achievement of the people themselves, did much to strengthen and promote the growth of the national consciousness, uniting the nation's forces and intensifying the liberation struggle.

After Bulgaria's Liberation from Ottoman domination (1878), great changes set in in the country's economy. The road was clear for free capitalist development.

The first organizer of education in newly-liberated Bulgaria was

Marin Drinov

Marin Drinov (1838-1906), a cultural figure, scholar and historian of European renown. The educational system which he developed was deeply democratic in character.

The country's economic progress made it necessary to create and develop higher education. A teachers' college was opened in 1888, and developed rapidly, becoming a university in 1904.

A state school of art was set up in 1896. It laid the foundations of the Academy of Fine Arts, formed in 1921. The fact that sculptures and paintings by students of this school were awarded a gold medal at the 1900 Art Exhibition in Paris testifies to the considerable successes achieved by its lecturers and students in a short time.

At the beginning of this century, in 1904, a Music School was opened on a private basis, which became a state school in 1913. By a decree of 1921, it was reorganized into a Musical Academy.

The Balkan War of 1912, and the First World War (1914) in particular, considerably checked the development of education and cultural life. Many schools were turned into hospitals. The teachers and cultural workers were mobilized. Thousands of children had to leave school. Revolutionary moods became rife among the people.

From 1920 to 1923, the country was ruled by the democratic government of the Bulgarian Agrarian Union. It carried out some partial democratic reforms in the schools, opening a greater number of general educational schools, especially in the villages, lengthening the course of compulsory education from four to seven years, and giving more attention to labour education. A large number of vocational schools were also set up.

On June 9, 1923, a monarcho-fascist coup d'état was carried out. The pro-fascist bourgeoisie did away with many democratic gains of the schools and teachers. A law was passed for the persecution of progressive teachers. A spirit of chauvinism was instilled in education. Many schools set up by the Bulgarian Agrarian Union's Government were closed. Educational ideas of the imperialist bourgeoisie were imported, aiming to 'conform the interests of the individual with those of society', without any relevance to the social class divisions and to make use of education as a means of overcoming the growing class contradictions. School boards became organs of the administrative power. Reactionary changes were made in secondary school education, its curriculum being reorganized in the spirit of a belligerent nationalist bourgeois policy. Some secondary schools in the small towns were closed down. This process continued on an increasing scale after 1934, when a new fascist coup d'état was carried through . The reactionary trends in education developed still further during the Second World War, when the country was occupied by the nazi troops.

Despite the bourgeois educational programmes and plans, many teachers carried through democratic ideas in teaching their subjects and instilled a progressive spirit in education. The activities of the Workers' Youth Union (WYU) in the schools played a big part in forming the pupils' outlook. Under the immediate political guidance of the Bulgarian Communist Party, the Union educated the young in the spirit of democratism, shaping the ideal of a socialist transformation of society, helping pupils to form a correct view of life, and training them as convinced oponents of capitalist exploitation, as fighters in the cause of socialism. This explains the fact that the former bourgeois school produced graduates with a materialistic outlook, brought up in the spirit of revolutionary dedication to the people's struggle and active participants in the anti-capitalist and anti-fascist struggle.

The Soviet victory over nazi Germany did much for the great triumph of the people's forces in Bulgaria. The socialist revolution of September 9, 1944, opened up new bright horizons for an un-

precedented progress in education, science and culture. They were placed at the service of progress and peace, becoming instrumental in the steady economic and cultural advance of the country and an important factor in the cultural revolution which had taken place and was still in progress in the People's Republic of Bulgaria.

PRINCIPLES OF THE EDUCATIONAL SYSTEM IN BULGARIA AND TRENDS IN EDUCATIONAL WORK

After the people's democratic rule was established, the Fatherland Front Government concentrated its efforts on the reorganization of the schools and education. Education and science were called upon to contribute to the fulfilment of the great historic task of reorganizing society on socialist lines.

The democratization of education was put in hand at once. As early as October 1944, a reorganization of the Ministry of National Education was carried out. Departments were set up in it for pre-school, elementary, secondary, college and higher education. Those whose activity had been closely linked with the policies of the fascist government were removed from leading posts and the schools. A new task was set to the schools: to educate the young in the spirit of progressive ideas, to guard them from chauvinistic and other reactionary ideas, while at the same time seeing to the formation of a sound scholarly and socio-political outlook among them. Entrance examinations to the secondary schools were eliminated so as to make secondary education widely accessible.

The people's government devoted its efforts to wiping out illiteracy among a considerable part of the population, and particularly in the villages, among the national minorities and in some border regions. The new times called for the active political involvement of all citizens and therefore the illiterate members of the population, whose number exceeded one hundred thousand, had to learn to read and write and become politically educated in a short time.

The curriculum and its contents were also reorganized. The study of the Russian language which had been ignored, neglected and even eliminated from the school programmes of the bourgeois school, was re-introduced. Urgent measures were taken to strengthen the ideological and political trends in the training and upbringing of the growing generation.

The main trends in the educational policy of the Fatherland Front

were formulated in the new constitution adopted in 1947. Article 79 settles matters concerning education as follows: 'Citizens have the right to education. Education is secular, democratic, progressive in spirit. The national minorities have the right to study in their own language and develop their national culture, while the study of the Bulgarian language is compulsory. Elementary education is compulsory and free of charge. The schools are run by the state. The right to education is ensured by the schools, training and educational institutes and universities with scholarships and hostels for the students, grants and encouragement especially for those who are particularly gifted.'

The first measures taken by the Fatherland Front Government in the sphere of education corresponded to the immense political and socio-economic transformations underway in the People's Republic of Bulgaria. They were carried out in line with the strengthening of the people's democratic power and the preparations for launching large-scale socialist construction. Success along this line was made possible by the growing unity of the working class and the working peasants, the stabilization of the economy, the adoption of the Marxist-Leninist ideology as the supreme ideology in directing, organizing and developing the socialist society. It was a stage in which preparations were made to pass over to a fully-fledged socialist system of people's education.

The construction of the socialist economy and culture in the People's Republic of Bulgaria made it imperative to develop a new system of education based on the progressive principles, as follows:

1. *General, compulsory, free education organized on democratic lines, with expanding secondary and higher education.* This principle is directly derived from the objectives of construction and the requirements of the cultural revolution. Socialism is a system implemented by the conscientious activity and clear political perspective of all working people. A socialist society cannot be guided by a select 'spiritual élite'; it is the achievement and the result of the creative work of the broadest popular masses.

2. *Unity of the system of public education.* In the People's Republic of Bulgaria, as in the socialist countries in general, everyone has an opportunity of continuing his (or her) education to the required degree. The curricula are to be planned so as to ensure an uninterrupted continuity in the successive grades of education. No restrictions exist as regards those who have graduated from a special type of school for entry into

the respective institutions of higher education. There are no class or other restrictions.

The principle of unity in the system of socialist education is profoundly democratic in character.

3. *Public and state character of education.* The socialist state alone has the right and the care to ensure education for every child of the people. The state organization of the schools in the People's Republic of Bulgaria guarantees to every educational establishment the necessary equipment, maintenance, the planned character and unity of the educational plans and curricula, prospective and qualified organizational and methodical guidance. The school is the achievement of an organized society.

4. *Secular character of education.* Since the school is the achievement of a socialist state, the Church has not and cannot have any influence on its organization and the trends of teaching and education. It is a major achievement, which has been the target and goal of many progressive socio-political movements.

5. *Guaranteed equal rights to education for men and women.* The socialist educational system contains no restrictions whatsoever for women. They have equal rights to education in all forms and grades of schools, studying by the same school plans and curricula.

6. *A right to education for the children of all nationalities.* Bulgaria is not a big country but a considerable number of national minorities inhabit it. There are no restrictions whatsoever, no discrimination or any attempts at national assimilation, through education. The Constitution of the People's Republic of Bulgaria guarantees education to all children, irrespective of the nationality they belong to.

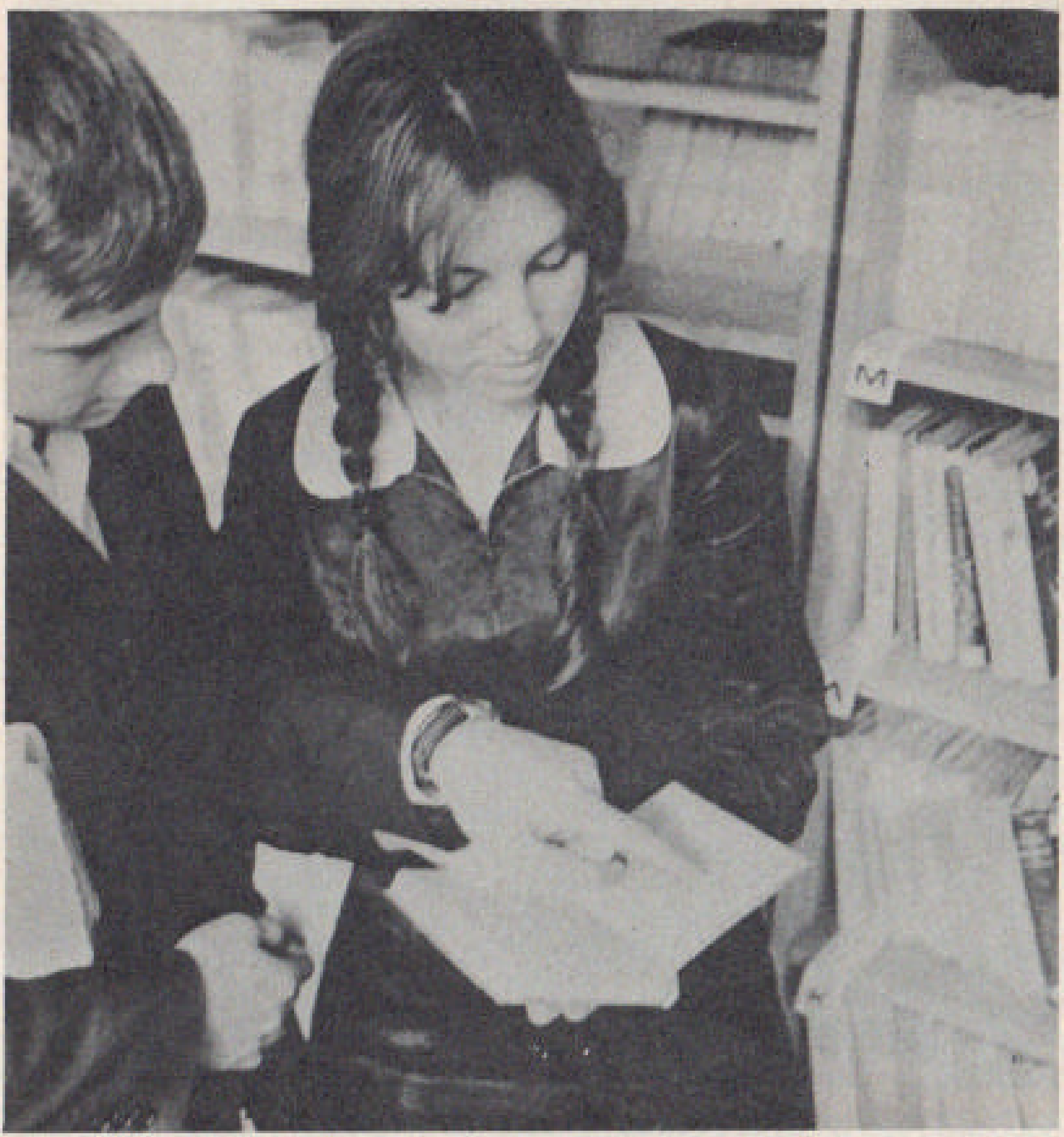
These and other supplementary principles make the educational system universal and democratic in the true sense of the word. The aim of the education given at the educational establishments of the People's Republic of Bulgaria is the all-round and harmonious development of the individual, enabling him actively and creatively to participate in the construction of the new life, to defend the socialist gains and work for the triumph of peace all over the world. This aim is realized in concrete terms along five main lines: intellectual, moral, aesthetic education, polytechnical education and physical culture.

The objectives of *intellectual education* are realized through the whole organization of the educational process. Schools in the People's

The Joliot-Curie secondary polytechnical school No 23 in Sofia. Teaching French at the phonetic lab

Republic of Bulgaria devote exceptional care to giving the young generation sound scientific knowledge to help form their science-based outlook. Only scientific knowledge offers a possibility of understanding and changing reality in accordance with the needs of the whole people, for their well-being.

Particular attention is devoted to *ethical education*. Alongside the changes in the material standards in new Bulgaria, the ethics of people, their conduct, views, attitude to labour and public property and to the



The library of the Joliot-Curie secondary polytechnical school No 23

state are also changing. That is why care for the development of a new outlook, of new mutual relations and ethical views comes foremost from the earliest age.

Side by side with the education of moral virtues, the school aspires to strengthen the moral stability of the young.

Moral stability depends on the strength of one's convictions, will power, the intensity and bent of feelings. All these qualities are formed

in the life of the normal school group, in everyday educational work.

Aesthetic education is part of the spiritual development of the personality. The development of productive forces and the intensification of production in every sphere demands that education should provide far sounder scientific and labour qualifications. The aesthetic culture of pupils who are to join production will have to be improved in order further to improve its quality.

Special attention is devoted to *polytechnical education*. The aim is to familiarize pupils with the main branches of production. They learn how to operate machine tools and more particularly modern techniques. Polytechnical education by no means implies vocational training, or narrow specialization. Answering, above all, the call for the versatile development of the personality, it constitutes the ABC of any professional activity. It is an inseparable part of general education and especially of the subjects of the natural sciences. It develops not only technical skills but also the intellectual faculties. The pupils' direct participation in the production process helps to achieve important results in education, inculcating a new attitude to labour, and establishing direct contacts between students and workers. Pupils become involved in the urgent problems of production and can appreciate the value and results of socialist emulation, of comradeship and mutual cooperation.

The new trends of education in the Bulgarian socialist school are also carried out through *physical training*, both in accordance with the regular school curricula and through mass PT activities outside. PT strengthens the body and is also important in forming the ethics of the personality. It helps to develop such qualities as courage, perseverance and consistency, a spirit of emulation, comradeship and cooperation in the common effort to gain a sports victory. It is also of great value in the aesthetic education of pupils. The rhythmical sports games and physical exercises develop a sense of plasticity of movement and a general aesthetic taste.

All the tasks set in the implementation of educational work through the process of education and extra-curricular activities are subjected to the principal common goal – the all-round and harmonious development of the personality.

The children's and youth organizations – the Dimitrov Pioneer Children's Organization *Septemvriiché* and the Dimitrov Communist Youth Union (DCYU) play a major role in the successful implementation of educational work. They are voluntary organizations; however,

Second and third grade pupils training in mini-basketball at the playground of the Balkan Sports Hall in Botevgrad

almost all children and teenagers belong to them. The youth organizations are concerned that their members should thoroughly master scientific knowledge and be brought up in the spirit of loyalty and devotion to the constructive cause of the socialist revolution, to acquire a sense of active social and political involvement and an aspiration to achieve higher qualifications for efficient participation in productive work. The youth organizations devote exceptional care to the expansion of amateur art activities and the adoption of the great cultural and aesthetic achievements of mankind, to raise the standards

of their general conduct and their mass participation in sports events. The Dimitrov Pioneer Children's Organization *Septemvriiché* and the Dimitrov Communist Youth Union are valuable assistants of the school in the education and upbringing of the growing generation.

STRUCTURE AND ACHIEVEMENTS OF EDUCATION

The Government of the People's Republic of Bulgaria has always devoted special care to improving the structure of education and extending its network. A cursory review of what has been achieved so far is sufficient convincingly to show that the successes in this field are exceptional.

Pre-school education. Educational care is given to children even before the age of three. The network of crèches is being steadily developed. Naturally, there is no call for all infants to be accommodated in them, since the socialist state shows special concern for the upbringing of children in the family. Mothers are increasingly relieved of duties and obligations at work, when necessary, to give the required care and attention to their families.

The number of children attending the kindergartens is progressively growing. Up to 1943, there was a total of 254 kindergartens in the country, attended by 12,000 children. By 1974 their number will be about 8,000 attended by 350,000 children. Besides that, special summer kindergartens are opened during the season. The system of pre-school education includes about 76 per cent of all children in the three to seven age group. The principles and objectives of education in Bulgaria already begin to be realized at this stage of pre-school education.

The main type of school is the *secondary general education and labour polytechnical school,* including:

a) *primary schools* with a four-year course of study;

b) elementary schools with an eight year course of study, including the primary course;

c) a full secondary school course of eleven years, *including the primary, elementary and secondary course of study.*

The number of full course secondary schools totals 7,138. This means that in comparison with school year 1943/1944, in the course of 30 years of people's rule, the number of schools has increased by 1,226. This is in itself a graphic example of the tremendous cultural revolution which is being carried out in the sphere of education in the People's Republic of Bulgaria.

Completion of the eight-year course of study is compulsory for all

Pioneer children in Stara Zagora rehearsing the Thracian dance Bouenek at the Pioneer House

children. The state provides all the material opportunities for the purpose. In Bulgaria there are no villages without schools or any children under 16 years of age outside the educational system.

The system of full-course secondary schools as well as independent secondary schools has also been extended. In 1944 they numbered 150, while in 1974 this figure had risen to 250. In all the towns and larger villages all pupils have the opportunity to go through the complete course of secondary school education. About 1974 the number of secondary school pupils had increased by some 96,000 and of teachers by 6,600.

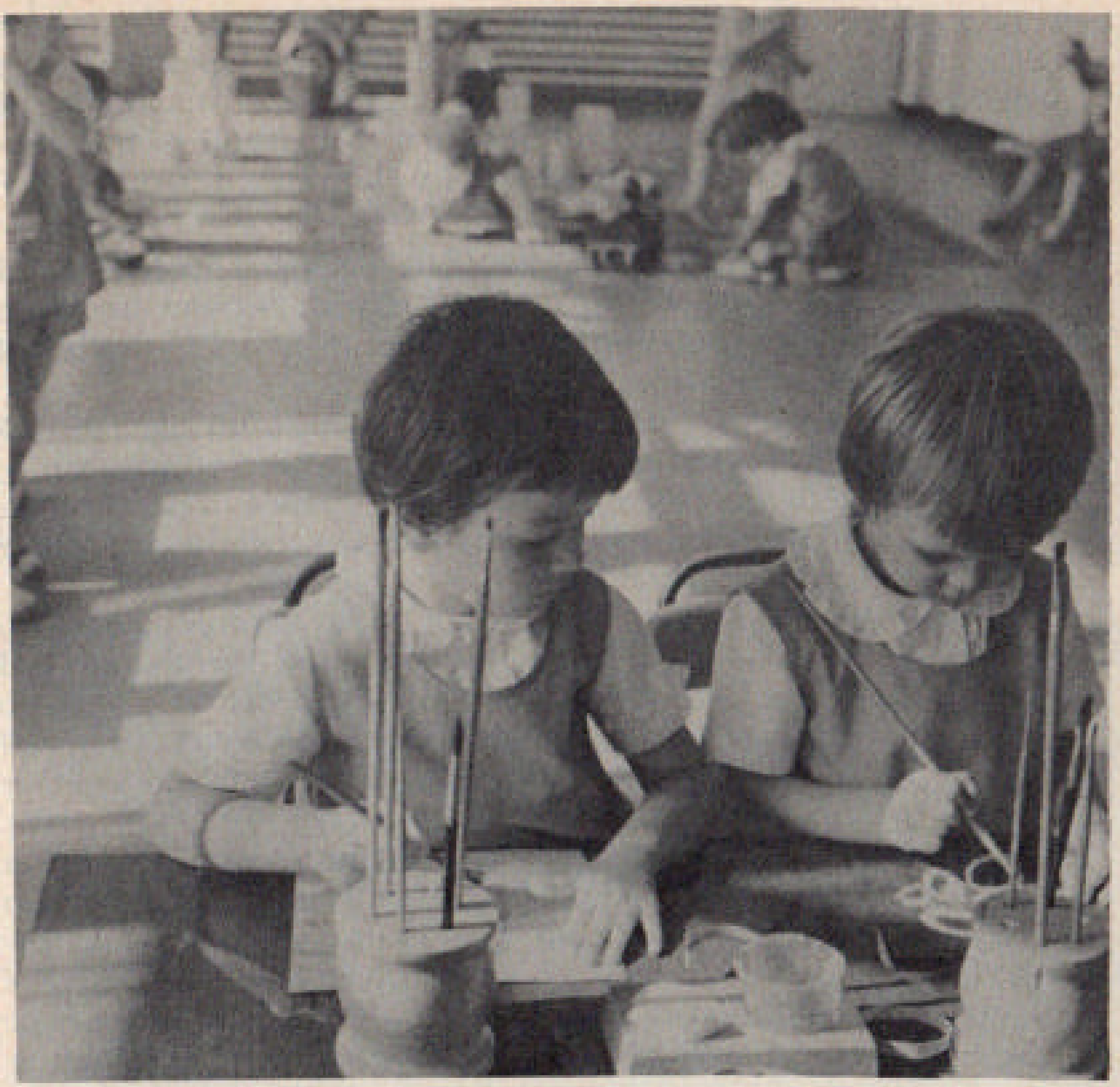
All the secondary school grades are taught according to a unified plan and unified school curricula. This is in line with the aim of giving all children a good general education and labour training.

The general educational school curriculum harmoniously combines subjects of the humanitarian, natural sciences and the mathematical group as well as the cycle of aesthetic education. In labour and professional training particular attention is paid to mathematics, physics, chemistry, biology, etc.

The No 57 nursery in Sofia

The general educational secondary schools also include foreign language schools: Russian, German, French and English. Their curriculum and programmes are essentially the same as in the other secondary schools. Pupils are admitted to them by competitive entry examinations. The first year (the seventh form) is a preparatory course for the regular eight form.

With a view to ensuring proper educational control over children outside school hours, when their parents are at work, the state has set up a system of study rooms, semi-boarding schools and full-boarding schools. It is believed that in future growing concern will be shown for



A model kindergarten in Pernik

the development of the system of study rooms and semi-boarding schools (full board day hostels) as they aid the school in its work, helping with the all-round preparation of children and their better upbringing, without replacing or playing down the important role of the family and parents as educators. That is why these halls and schools will continue to increase. By 1974 some 300 schools in the country had been organized as semi-boarding schools, and their numbers are to increase.

At some schools, and particularly those specially organized for children with retarded development or children showing special

talents, a full boarding school system has been developed, since these children come from different parts of the country. This type of boarding school has certain advantages in the educating and upbringing of children, but it also separates children from their families for a considerable time. Boarding schools are therefore formed only to meet concrete requirements,

Besides the secondary general educational and labour polytechnical schools a vast network of *vocational and technical* schools has been developed in Bulgaria. Training in specialities in about 30 branches of production is given by them.

Until 1944 only 65 secondary vocational schools with about 20,000 pupils existed in Bulgaria. In 30 years of people's rule their number increased to 446 with more than 133,000 pupils. To these should be added the 311 vocational technical schools with a two- to three-year course of study, training over 100,000 pupils.

The secondary vocational schools train cadres for production. Admittance to them takes place after completion of the seventh form and the course of study is four years. Those finishing them and wishing to obtain qualifications for managing technical staff on a secondary school level may continue their education by extramural studies for another two years.

The technical schools admit pupils having finished the eight form at school and their course of study is four years. Their graduates obtain qualifications as secondary school technicians and managing personnel. There are other technical schools, too, with a two year course of training after completion of secondary school. All graduates of the secondary vocational and technical schools have the right to continue their education in the specialty chosen by them at university level.

In most of these schools the state takes over the maintenance of the pupils, providing scholarships, free board, lodging and clothing. The vocational schools train good specialists with a wide general culture.

For the young people who, for one reason or another, have failed to complete the required general education or vocational training, secondary *evening schools* are opened at the factories, mines or cooperative farms. These schools make it possible for young people to study without leaving their jobs.

Young people have a free choice of the kind of school they wish to attend. Advice on careers is placed on a scientific basis. Every pupil is given preliminary information about the school in which he or she can further continue studying. The prospects of their professional training are also elucidated. Inquiries and psychological studies are undertaken and career advice centres organized for the purpose, giving pupils and

First grade pupils learning arithmetic at the Yako Dorossiev primary school No 30 in Sofia

parents alike valuable help in making their decision as to what kind and exactly which school to choose. A special department in charge of the activity of all career advice centres has been formed at the Ministry of Public Education.

Besides these schools, special ones are organized for delicate children or any having congenital defects. Many different kinds of such schools exist: for children suffering from various illnesses, for deaf-mutes, blind and maladjusted children. They are taught by specially

trained teachers and specialists, defectologists, who obtain their degrees at the Sofia State University.

The *institutions of higher education* are the highest grade in the educational system. The rate of their growth in the past thirty years is unknown in any capitalist country. Whereas in prewar Bulgaria there were only eight institutions of higher education with 25 specialties, a teaching staff of 418 and 4,000 students, today there are 26 institutions of higher education, three of which are universities and two academies, with a total of 37 departments. The system includes 173 specialties, with opportunities for 120 specializations which were non-existent before the Ninth of September 1944. In 1973 the number of lecturers and assistants was 7,650, and of students about 94,000.

Teachers are trained at the universities and other educational establishments, where they are given a scientific education and training in teaching methods. Special *Teachers' Colleges* cater for the needs and requirements of pre-school and elementary education.

There are permanent courses for *post-graduate specialization* at the institutions of higher education. This is one of the forms of re-training undertaken by specialists every five years.

REFORMS AND PROSPECTS SCHOOL OF THE FUTURE

Every stage in the development of society calls for changes in the system of education, which must be brought into line with the requirements of society. That is because education is a function of society, and in turn becomes a factor in its further progress. The educational reforms carried out in the People's Republic of Bulgaria have resulted from the need to have education conform to the changes that have taken place and will continue to take place in the economic and cultural life of the country. That is because education is the chief factor in ensuring qualified cadres for construction and for raising the cultural standards of the citizens of the Republic, as well as their civic consciousness. Education must respond to the growing demands which life sets before it.

It is the consistent policy of the Government of the People's Republic of Bulgaria to strengthen and develop the material and technical base of society, to improve public relations, enrich the cultural and material well-being of the people, gradually to overcome certain disproportions arising in different walks of socio-economic life, and to give scope to the all-round development of the individual. The introduction of modern methods of production, automation and mechanization allow more time and scope for the development of the productive forces. As a result, for several years now a gradual transition has been made in some key sectors of the economy to a five-day working week. In this way, the relative number of people creating not only material but also cultural values, is growing. Personalities capable of versatile creative work are formed. All this raises to a very great extent the meaning and role of education.

This has made it necessary to carry out changes in the system of education.

In 1972, a new model of unified secondary general educational polytechnical school was approved. The underlying idea of the reform was to make the system capable of ever more directly responding to the rapidly changing economic and cultural conditions and fulfilling the task of training highly qualified specialists of a new type, who would be in a position creatively and independently to solve the problems set by

Experimenting a model of a unified secondary polytechnical school at the V.I.Lenin primary school No 12 in Sofia. Practical training for the tenth grade pupils

the scientific and technical revolution. The new educational system is called upon increasingly to stimulate active and creative thinking. The curriculum of education is to be further modernized. Contemporary trends of the integration and differentiation of sciences and the interpenetration of knowledge make it necessary to introduce changes in the structure and contents of educational curricula. Particular attention is paid to the trend of the penetration of mathematics into the various spheres of human knowledge.

A series of new problems also arise in connection with the regulation of the process of training and education. The most important thing in this process is to do away with the age-long inertia in treating the pupil as the passive object of training. The new socialist society, now being built in Bulgaria, calls for creative people, who cannot be brought up and educated by passive methods. The pupil should become both the subject of education, but also a thinking person, actively participating in the quest for knowledge and capable of independently reaching scientific truth. This brings the role of independent work, the extensive and purposeful use of programmed teaching to the fore. Certain classical principles are given a new interpretation through the modern technical aids which offer great opportunities of improving the educational process.

The new educational reform more definitely affects certain individual links in the educational system. Work in the kindergarten, for instance, is reorganized so as to prepare children for systematic training at school, by intensifying their programmes in Bulgarian language, the natural sciences, etc. Changes are also being made in the structure of schools. The former grades of school – elementary, intermediary (progymnasium) and high school (gymnasium) – no longer correspond to the social requirements for education. They largely reflect the division of people in the class society. In the past, the elementary grade was universal and compulsory for all children. It was not only education on a mass scale, but the only education obtained by the major part of the population. That is why the educational programmes were drawn up in such a way that the elementary course of four forms should provide a complete cycle of studies sufficient to enable pupils to engage in fundamental agricultural and crafts activities. Although it was compulsory by law, many people failed to obtain even elementary education under the conditions of bourgeois rule, owing to the lack of means and the formal attitude to this basic requirement.

The intermediary grade of schools, the progymnasiums, held a more special place in the system of education. They were founded by virtue of a law passed in 1909. According to the intentions of the bourgeois legislator of those days, it was intended to give a higher standard of complete education for the landless classes. When introducing the bill to the National Assembly, Moushanov, the then Minister of Education, admitted: 'It is no secret that today, and for a long time to come, high school education will be the privilege of the propertied urban and peasant strata of the population.' Therefore, by again going through the cycle of knowledge given in the elementary grade of school, the intermediary grade was in itself a more or less com-

plete stage in education, intended as a 'substitute' for high school education.

High school (gymnasium) education was an expanded version of the curriculum of the former grade, and also included new school subjects taught according to more extensive programmes.

In realizing the principle of unity in the system of public education, the former system, though reorganized, proved unsuitable. It is fully possible to organize the curriculum in such a way as to achieve uninterrupted continuity from one grade of education to the next, to discard the former concepts of elementary, intermediary and high school education and develop a unified educational system in the true sense of the word in the general educational labour polytechnical school with a continuous course of study, compulsory and accessible to all. It will be possible for all children to obtain full secondary education which will become compulsory and universal in the near future.

Although having successfully coped for some time with important state and production tasks, in the period up to 1972 the polytechnical school also revealed certain faults: a bent for early professionalization and inadequate coordination of the general theoretical and practical training. Other obstacles were slavery to traditionalism and formalism, the sometimes inadequate training of teachers and leading educational workers, and the insufficient material and technical facilities at the schools. The organization of educational work at the factories and enterprises, the cooperative and state farms also proved inadequate.

This does not imply that the good results and achievements should be ignored. Today, however, social development calls for a reform in education that would ensure and guarantee the realistic possibility of enlisting young people in socially useful work from the ageof 16 or 17 onwards.

The educational system will in future ensure a planned filling in of the ranks of the working class and the other social groups by qualified specialists so as to become a mainstay of the new socialist society, to enrich the growing generation with new knowledge and help in their technical qualification. A streamlined system of public education is being thus developed in the People's Republic of Bulgaria, linking education in the schools and the institutions of higher education with the units for qualification and requalification, with material production, with its development and needs. The structure, contents and methods of education are also being improved in line with the latest requirements. New school plans and curricula, providing for higher theoretical and labour training, are introduced.

This much more flexible educational system corresponds not only

District centre for young technicians in Pleven. Members of the electrotechnics study circle are informed about the latest devices in the field

to the present, but also to the future needs of the country. Through a thoroughgoing reorganization of the educational system and its contents, through a more rational organization of the process of learning and educational work, the school is becoming a powerful educational institute. The new conception of further reconstruction consists in gradually overcoming the existing differences between general and professional education and building up a completely unified system of secondary education, universal and obligatory for all.

The implementation of these tasks is becoming quite possible under the present socio-economic conditions.

The new secondary general educational and labour polytechnical school has a ten years course of study instead of 11, as it was until recently. The graduates of this kind of school, depending on their labour training, may join production and be given the opportunity to continue their education in schools for professional training with varying terms of study, depending on the character and requirements of their activity, as well as in semi-higher and higher educational institutions.

Although it seems a perfectly natural development to have general and professional education merge in future, for a certain period the vocational schools will continue to exist independently, placing greater emphasis on general education. According to the government plan, by the end of the Sixth Five-Year Plan these schools will have trained a minimum of 250,000 qualified workers, while the professional skill of another 300,000 workers will have been improved in them.

Educational tasks are also being implemented in the process of education in all schools and in every school subject. Among them are the development of a science-based outlook, strengthening the pupils' ideological stability, imbuing them with loyalty to the cause of socialist construction, building up the required qualities of the man of the new society: labour discipline, devotion to the chosen field of activity, a high sense of public and labour responsibility, conscientious participation in socialist emulation, development of a critical sense and a sense of self-criticism, etc.

A Higher Educational Council has been set up at the Ministry of Public Education for the unified general educational polytechnical schools and technical schools, as a consultative body in education with the participation of outstanding scientific workers, teachers, experts, public workers and other educationists.

New models are introduced according to plan. Their application began from the first form of school year 1973/74 and will be completed by 1984. Each new step is made after thorough scientific studies and experiments with the cooperation of and in consultation with a large number of experts.

The Government of the People's Republic of Bulgaria has always devoted great care to higher education. In less than three decades Bulgaria has advanced to one of the foremost places in the world as regards the growth of higher education. Science and higher education are associated with the task of rapid scientific and technical progress and the people's prosperity. Higher education is not a privilege of the propertied classes or bound by any caste restrictions; it is completely free and accessible to all intelligent children of the working people, be-

A ballet class at the Pioneer Palace in Sofia

ing based on the most progressive achievements of world science and technology. Higher education is entirely subordinated to the large-scale construction programme of the Government and the people's aspiration steadily to increase their material and cultural benefits.

The task of further development of electrification, electronization, the rise of the chemical industry of industrial biology, of the improvement of technological processes and the forms of organization or production relations, makes it imperative to raise the scientific competence and activity of the teaching staff to achieve higher standards of the student's scientific training. The steady enrichment of science and

technology with fresh scientific information makes it necessary to train not only good specialists, equipped with up-to-date knowledge, but people capable of creative thinking and independent research work, of applying the latest innovations, boldly experimenting and devising new methods of research and action.

This sets particularly responsible tasks to the workers in the sphere of higher education. The institutions of higher education are becoming major centres of scientific research. It is known that lecturers are unable to improve the scientific level of their lectures, if deprived of opportunities for research work. An entirely new organization of the curriculum is needed, which will enlist students in research work, to acquire knowledge, skills and experience and learn how to conduct research work themselves. Students should be trained by being given the chance to participate in the development, and not only the study, of a given science. Science will thus become a basis for training new cadres.

The institutions of higher education would be unable to meet the growing demands made upon them unless a far-reaching reorganization of education were to be carried out at once. This reorganization aims, above all, at ensuring cadres at different levels, depending on the needs of the nation's economy, of education and the students. The so-called 'block system' has been adopted. Specialists with a more general knowledge of their specialty are trained in Block A, to meet the basic needs for cadres in the different sectors of the economy, technology, science, culture, education, state construction, social administration, etc. Block B is envisaged for those who have shown greater abilities for creative scientific work, training specialists in more specific fields of science and technology to meet the needs of highly qualified cadres in all fundamental, applied and production profiles. Candidates are admitted after careful selection according to higher criteria. In the course of one or two years students in this block have the opportunity of obtaining sound specialization. The scientific potential of the country mainly draws on this source. The methodology and aptitude for scientific research work are obtained by these students while they are still in training.

The most capable students may further continue their education in the system of post-graduate studies. Considerable encouragement and opportunities for progress in science, for creative mastery of the methods of scientific research work, are given in this range. The training of post-graduate students is mostly conducted on individual lines and competent scientific tuition is guaranteed.

Students who have not been admitted to Block B or post-graduate

Medical students in Varna

studies, but have begun work in production, or in the system of public education and culture, may continue their education in the system of post-graduate specialization. From time to time, and for fixed terms, they have the opportunity of becoming acquainted with innovations and new discoveries in their science, conducting independent investigations, and generally improving their qualifications.

The reform also concerns the range of specialities, and principally those belonging to Block A. New specialities are being differentiated in its range as, for instance, mechanics, physics of the earth, the atmosphere and space, physics of semi-conductors, engineering physics, etc. The provisions for specialization are an important part of the system of specialties. Specializations are conducted according to a specific plan, through intensive encouragement of students to take up

research work in a specific field of science such as, for instance, organic or inorganic chemistry, microbiology, archaeology, etc.

The new models of specialties also require new methods, contents, principles and scientific organization of the process of study, so as to ensure success in the training of specialists of a new type. The classic methods of lectures, seminar exercises, practical training in the specialty, teaching and production training,etc., are not being rejected but are interpreted in a new way. The main objective is to achieve greater efficiency in training, to stimulate to the maximum the students' creative approach to science, to pare away obsolete facts and information in scientific theory and practice, and to bring education closer to the tasks and requirements of public and cultural life.

DEVELOPMENT OF SCIENCE

Science has an important role to play under the conditions of socialist construction. It becomes a direct production force. All activities in the economic cultural and political life are placed on a scientific basis.

The Government of the People's Republic of Bulgaria shows great concern for the advance of science and the extensive development of all its branches. Such rapid progress, both in fundamental and in applied and pilot research, has never been made before in this country. 'Our successful forward development,' said Todor Zhivkov, First Secretary of the Central Committee of the Bulgarian Communist Party and President of the State Council, 'depends to an increasing degree and will continue to depend on the ability to harness science to the resolution of the major, cardinal issues, on the ability to apply its achievements in all spheres of life.'[1]

Although a small country by territory and population, Bulgaria has 111 academic institutes, 62 centres for research, pilot and designing activity, and ten scientific centres set up at ministries and departments.

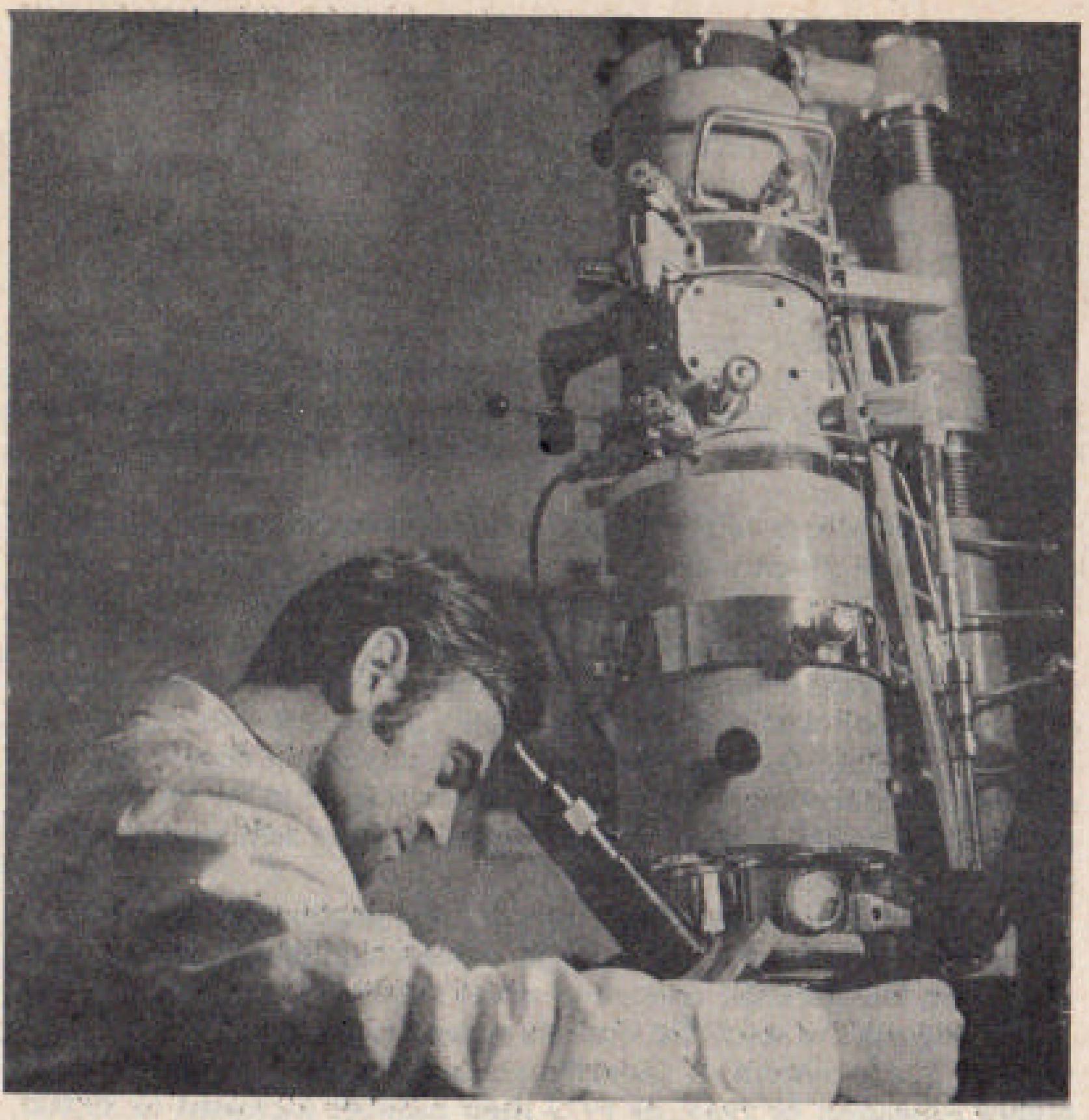
The number of scientific workers is rapidly growing. While 14,700 worked in the system of scientific research units and institutions of higher education in 1963, in 1972 their number increased to 59,900, and exceeded 60,000 in 1974. The relative share of state expenditure on research and pilot work is also increasing. While in 1963 it accounted for 0.75 per cent of the national income, in 1972 it accounted for 2.10 per cent and will rise to 2.66 per cent by the end of 1975.

The number of research fellows is the largest in the sphere of technical sciences. About 72 per cent of the scientific cadres in industry work in machine building. The second largest is the number of scientists and research fellows in the science of economics, and then in physics, mathematics and the social sciences.

Noteworthy are the achievements of Bulgarian science and technical thought in the field of mathematics, nuclear physics, physical elec-

---

* T. ZHIVKOV, *Report of the CC of the BCP to the Tenth Party Congress*, Partizdat, S., 1971, p.84



The Institute of Science and Technology of Metals in Sofia. An electron microscope

tronics, organic synthesis and biochemistry. Scholars have outstanding achievements to their credit in philosophy, history and linguistics. Many inventions of Bulgarian scientists have been patented abroad. The safety coating of graphite electrodes is made under a Bulgarian license in England and Canada. Great economic efficiency is also gained by the Bulgarian invention of electronic refinement of copper at high current density. Licenses for this invention have been sold to the USA, Japan, Italy and Spain. Interest in it is also shown in the Federal German Republic, Peru, etc. The Bulgarian method of foamplastics

The Computer Centre at the State Planning Committee

counter-pressure casting, with an economic effect of 6.2 million leva per annum, is also very popular.

The collaboration of Bulgarian scholars is sought in drawing up international scientific programmes in the field of biology, chemistry, etc. Bulgarian apparatus has been used in the construction of the sputnik *Intercosmos 8* (ion sondes, Legmuir sonde and electronic blocks).

Bulgarian science has scored great achievements on a world level and deservedly enjoys international recognition.

Great attention is paid to the development of the social sciences, which provide guidance in the various processes of the technological revolution, way of life, culture and education. Special measures are taken to intensify and generally improve scientific activity, the organs of administration in science, of the system of its planning and management and the qualification of scientific workers.

The Bulgarian Academy of Sciences, the Georgi Dimitrov Academy of Agricultural Engineering, the Higher School of Medicine, and other institutions of higher education are also major centres of science. The

Sofia University

process of building up integral centres for science, research and pilot activity in all branches of science, economy and culture has been completed. These centres are a suitable form of bringing science and education closer to production, of shortening the 'research-production' cycle. Personal effort, or even that of small, isolated research teams cannot achieve anything in science today. The complexity of problems calls for larger associations that would ensure all-round investigation of the most intricate phenomena. Combined efforts along these lines have already produced positive results. So far 51 centres for research and pilot acitivity have been set up, incorporating the work of about 37,000 scientific workers. Each centre of this kind employs about 725 research fellows and auxiliary research personnel on an average. They have become established as powerful scientific associations, whose activities have an exceptional effect on the development of machine building, power generation, mechanization and automation. The establishment

The N.Poushkarov Agrology Institute in Sofia

of these centres was the first decisive step in the reorganization of scientific activity. The organizational experience which they have gained and continue accumulating will in time assist in their further consolidation.

The reorganization of scientific activity has a direct bearing on higher education. The institutions of higher education, in which many scientists are engaged in creative work, come ever closer to the requirements for the further concentration of scientific activity and integration between science and production, so that science may penetrate into all spheres of life. Research work is ever more closely bound with the task of training personnel with higher education. Not only the institutions of higher education but also scientific and research institutes are concerned with this task and implement it along the lines of integration. It is not merely a question of unification of the research plans, but of something much more important and essential: coor-

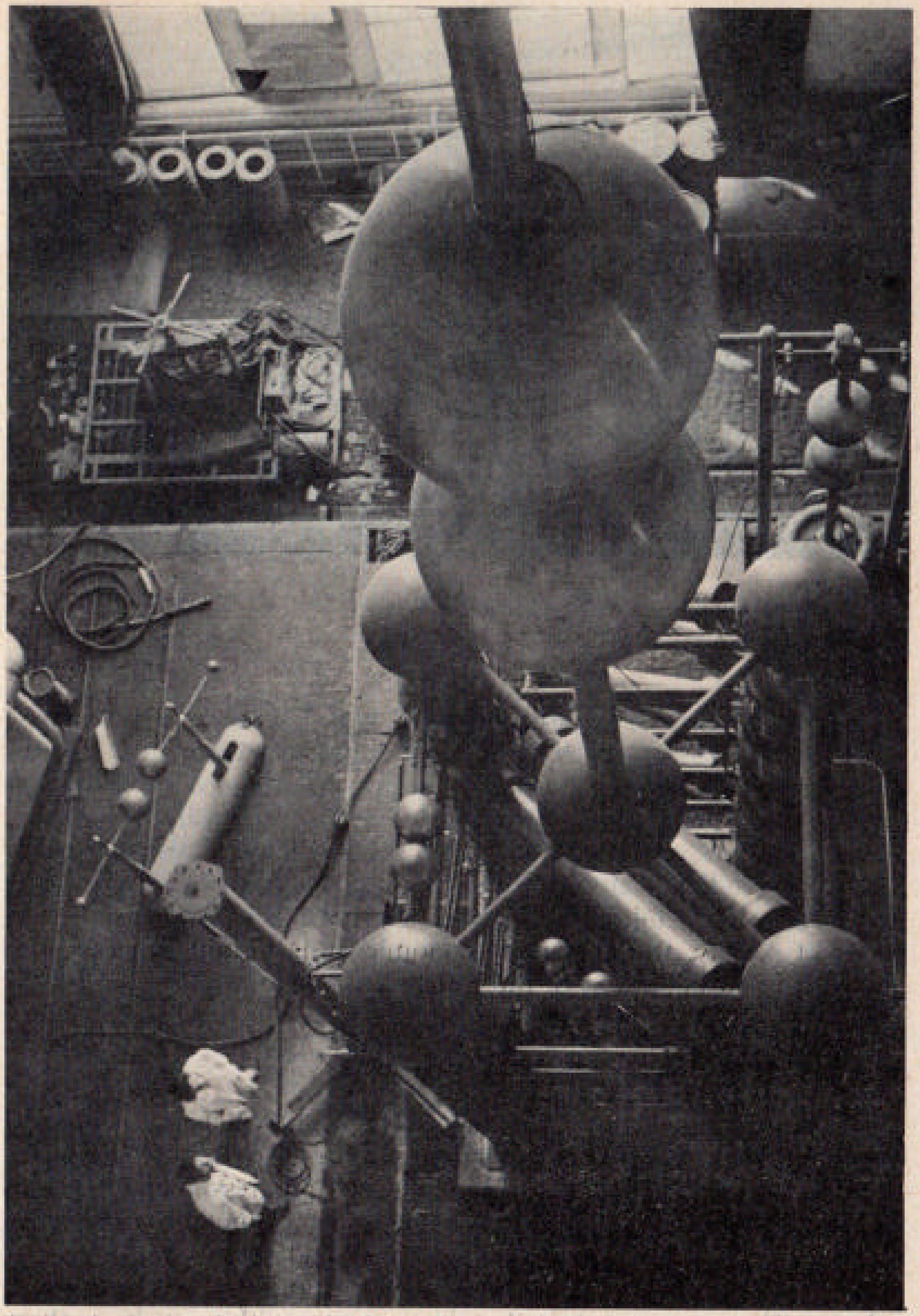
dinating research work at all levels with the educational work at the institutions of higher education. The latter will profit from the achievements of specialists at the research institutes. Eminent experts, who have until now worked only outside the educational system, will in future participate in the process of training.

The scientific associations are turning into a fundamental form of research and teaching work. They comprise scientific institutes and other research, training and pilot units, which are directly concerned with the problems in a given sphere of activity, and are naturally integrated. The chief criteria in their development are the main trends and key factors in the country's socio-economic development, the objective processes derived from the progress of science and technology in this country today and in the future.

All this demands the devising of a more flexible structure of the specialties and faculties, in order to achieve not a mechanical, but a constructive and efficient integration with scientific units which have until now only been engaged in scientific work dissociated from the scientific plans of the institutions of higher education. In this way integral centres of scientific work and training of the young specialists are formed.

As a result of the integration, a unified material base has been provided for all Centres, which can use in common laboratories, service stations, information offices. Cooperation and integration in the sphere of science and education is also being developed and intensified with other countries. An optimal integral structure of the administration of science and education is being evolved.

This new organization helps to bring new groups of scientists into the institutions of higher education and at the same time settles other important problems: the establishment of a good material base for training, proper combination of scientific and teaching work, more direct contacts between the institutions of higher education and the state economic associations and enterprises. The training of young specialists is also brought into line with production targets. The scientific institutes also profit from this organization of work. They obtain competent help from the lecturers at the institutions of higher education and can avail themselves of the energies of students and select from among them the most gifted and suited to meet their own needs. It is production, however, that profits most, since knowledge and the latest scientific inventions can rapidly be applied in this way. Production will continue placing the most urgent problems for proper solution without delay before scientific thought and the young specialists who are now being trained.



The electro-lab at the Vassil Kolarov Power Engineering Plant

The Cyril and Methodius National Library in Sofia

The integration of the institutions of higher education with scientific research institutes by no means implies encroaching on the autonomy of the one or the other. Both integrating sides, however, grow stronger in the process. The whole system of scientific research institutes becomes a mainstay for the education and training of young specialists, while the latter process is associated with the further expansion of the powerful scientific front. Everything is subjected to the needs of society, the all-round economic and cultural progress, the prosperity and happiness of the Bulgarian people.

***

Former bourgeois Bulgaria was a poor country, lagging behind in its economic and cultural development. Within three decades alone the People's Republic of Bulgaria has made such progress in the development of its productive forces that today it ranks among the countries whose rate of growth in industry is high and whose agriculture is modern. It has also achieved remarkable success in all spheres of culture. These unprecedented achievements within such a short historical period have been made possible by the correct policy of the leading force – the Bulgarian Communist Party. Science and education

have played a major role in this nationwide upswing. They are wholly devoted to the cause of progress. After the victory of the socialist revolution in Bulgaria, the Bulgarian people's traditional industry and studiousness found an unprecedented scope for development. The people will continue to develop their creative energies in the time to come, and posterity will pay due tribute to the dedicated workers in the field of science and education who made such a significant contribution to the progress of our people.

Prof. Zhecho Atanassov

EDUCATION AND SCIENCE IN THE PEOPLE'S REPUBLIC OF BULGARIA

Bulgarian editor: *Sevdalina Halova*
Artist: *Dimiter Kartalev*
Art editor: *Vesselin Tsakov*
Technical editor: *Maria Shishmanova*
Proof-reader: *Iliana Simeonova*

Format 59/84/16, 3 Printers' Sheets
Sofia Press Production Centre

Imported by
IMPORTED PUBLICATIONS, INC.
320 West Ohio Street
Chicago, Illinois 60610
Phone 312/787-9017